

## One protégé mentors another

Longtime SOARS protégé and Hurricane Research Division (HRD) employee Shirley Murillo shared her office with another SOARS hurricane enthusiast during the summer of 2002, second-year protégé Shanna Pitter. Shanna went to Miami to conduct her 2002 SOARS research at HRD, with Frank Marks (NOAA) and Wen-Chau Lee (NCAR) as her science research mentors.

Shanna used the ground-based velocity track display (GBVTD) technique to retrieve the primary wind circulation of Hurricane Bret, which occurred in 1999. Shirley had used the GBVTD technique to study the wind circulation of a different hurricane, so it was easy for her to become another one of Shanna's mentors.

"At the beginning of the summer," Shirley said, "I gave Shanna a mini-presentation on the GBVTD work I had done, explaining how to run the technique and how to interpret the results." Helping Shanna had a side benefit for Shirley: "I hadn't looked at my own work in this area for nine months, so sitting down with Shanna was a refresher course for me on what I had to do with my thesis and scientific work."

"Shirley went through the entire thing with me," Shanna said. "She was completely selfless, even though she had her own work to do. Since we shared an office, she was right there whenever I had questions."

Shirley's mentoring went beyond the operational aspects of the GBVTD technique. "I saw myself in her. I remembered being where she was a couple of summers ago— not knowing what the technique was about or what I was getting into," Shirley said. "So I knew her fears and doubts and I could reassure her that, 'Don't worry, it might be hard now, but you'll get results and things will get better.'" There was also time for fun— they went to the beach and the diverse restaurants and supermarkets of Miami.

As the summer progressed, Shirley checked in with Shanna about her SOARS deadlines. Shanna was e-mailing drafts of sections of her paper to Don Stott (UCAR Office of Programs), her writing and communication mentor back in Boulder. Meanwhile, Shirley read and made comments on the drafts in Miami.

Just like all the protégés back in Boulder, Shanna gave two practice talks on her research, with one of her science research mentors present for each talk. Shirley attended both talks and gave comments.

Despite Shirley's help and the similarity in their research, Shanna faced her own set of challenges. "The GBVTD program was written to run on NCAR computers," Shanna said. "HRD has different computers with a different operating system, different compilers, and different software for viewing the output. Also, the data I was using was level 2 [the raw data], while the version of GBVTD they were using at HRD was written for level 4 data [a reduced data set]."

Wen-Chau explained that HRD uses level 4 data for operational purposes because it allows them to get the hurricane wind data in real-time. Because of bandwidth limits, HRD cannot get the larger, level 2 data in real-time. “Shanna’s work was to help the Hurricane Research Division bring the level 2 code over to their computers,” he said.

Since Wen-Chau was in Key West for much of the summer working on another experiment, he was able to make four trips to Miami to help Shanna solve technical problems with the algorithm. Shanna also made one trip to Key West to work with Wen-Chau.

Together, they solved the technical problems and Shanna was able to get results before heading back to Boulder to present her research at the SOARS colloquium. In the fall, she entered graduate school at Colorado State University in atmospheric science.